worcester mobility action plan

October 12, 2023

Existing Conditions, Vision, and Goals

Mobility Action Plan

Working Group Meeting

City of Worcester, Nelson\Nygaard

Agenda

1. Introduction
2. Engagement Overview
3. Existing Conditions Recap
4. Vision & Goals
5. Open Discussion

INTRODUCTION

1

Participation

Purpose: to confirm existing conditions and vision & goals, gather feedback, and allow for more in-depth discussion of topics addressed in summer public engagement. This meeting is not designed around getting feedback from the general public.

Invited Participants: Working Group members were invited as topic area experts able to advise and support the consultant team on more technical aspects of the plan analysis and recommendation development.

Public Comment: input from members of the public will be welcomed once at the end of the meeting.

- Use the "raise hand" tool to indicate you wish to speak. *If you are joining by phone, press *9 to raise or lower your hand.*
- You will be recognized in the order in which you raise your hand and asked to unmute and speak. *If you are joining by phone, press *6 to unmute or mute.*
- Please keep your comment brief, up to a maximum of 2 minutes to allow time for others to speak.

Documentation: meetings will be recorded and posted with slides and meeting minutes on the project website.

ENGAGEMENT

2

Engagement by the numbers…

Focus Groups: 13

- 172 focus group participants in total
  - 3 Youth groups
  - 3 Senior groups
  - 3 Non-English-speaking groups
  - 3 Business/institutional groups
  - 1 Disability group

Engagement Activities

- Pop-up Events: 8
  - 350+ people engaged during the pop-up events
- Transportation Working Group Meetings: 1
- Online Survey: 1

Key Findings

Transit | *The topic of public transit was a key priority that came up frequently during engagement activities.*

Service: Challenges with reliability, frequency, timing, network gaps

Infrastructure: Need more bus shelters and benches, better snow clearance

Fare free: Fare free transit is a valuable resource to the City and should continue

Walking | *Pedestrians in Worcester are challenged with unsafe walking facilities and when interacting with speeding drivers.*

Safety: Hazardous crossings. Traffic-calming would help, as well as better lighting, sidewalk repairs, and other ADA-related improvements.

Pedestrian Network: A disconnected network of sidewalk infrastructure and lack of intuitive crossings. Challenges related to ADA and accessibility.

Biking | *Biking is of interest to people in Worcester, but most won't bike without more dedicated facilities.*

Bike Network: Current disconnected network creates safety issues, confusion, and generally deters people from biking

Infrastructure: People would be more inclined to bike if there were more protected on- and off-street lanes and more bike parking.

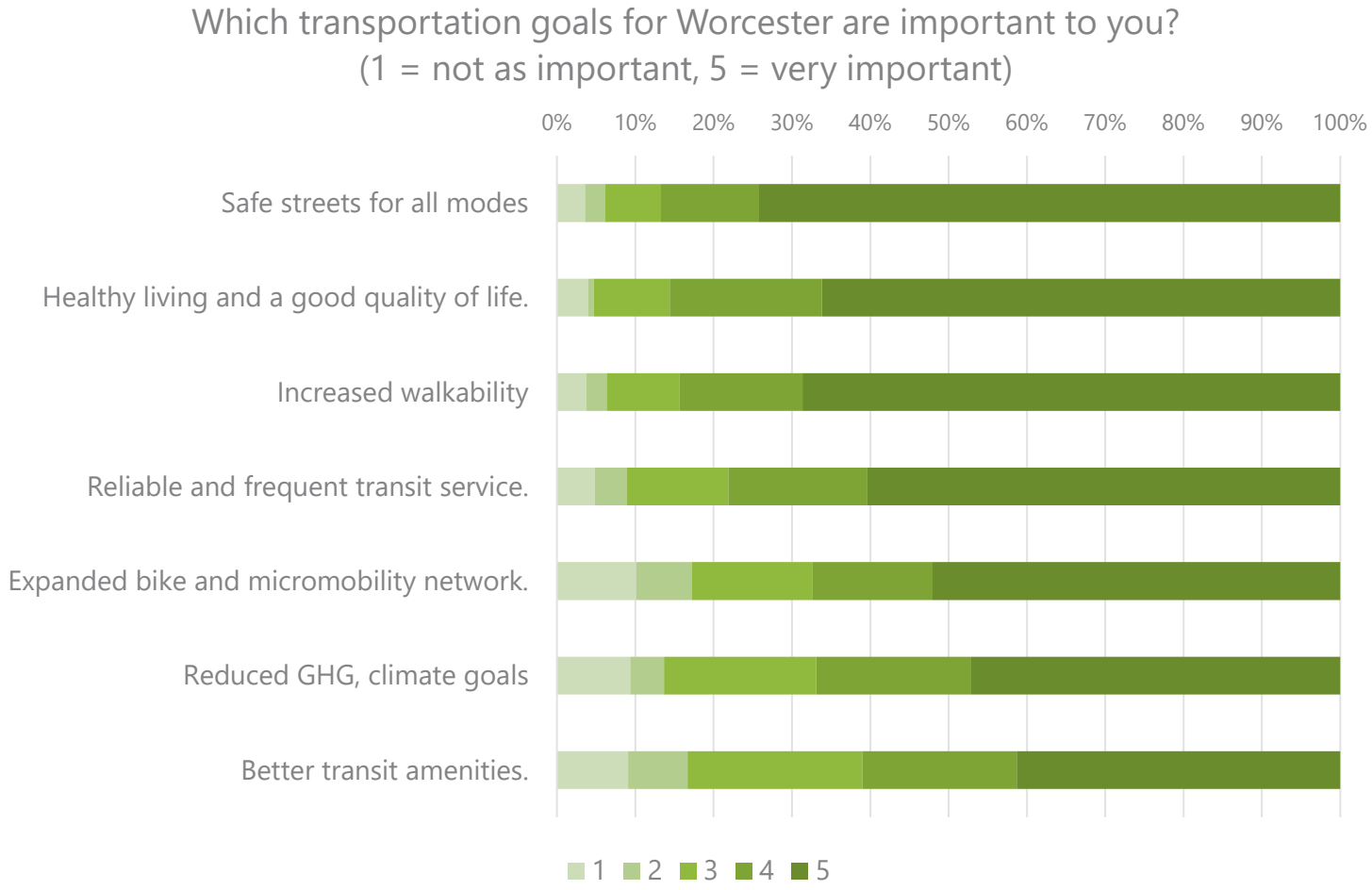
Driving | *Speeding is a primary issue related to motor vehicle travel in the City.*

Speeding: Speeding prevalent throughout the city; enforcement/monitoring is lacking. Initiatives related to traffic calming and slow streets would help.

Parking: People often park on sidewalks or in other illegal locations.

Online Survey: Mobility Priorities

- "Safe streets for all modes" was most rated very important
  - Encompasses other goals, comments tying safety and comfort to climate, biking, and health
  - Similar to feedback gathered at in-person events
- Respondents generally felt like all the goals were fairly important
- Climate goals showed up as secondary priorities
  - Likely they are seen as good outcome, but not the purpose of a project



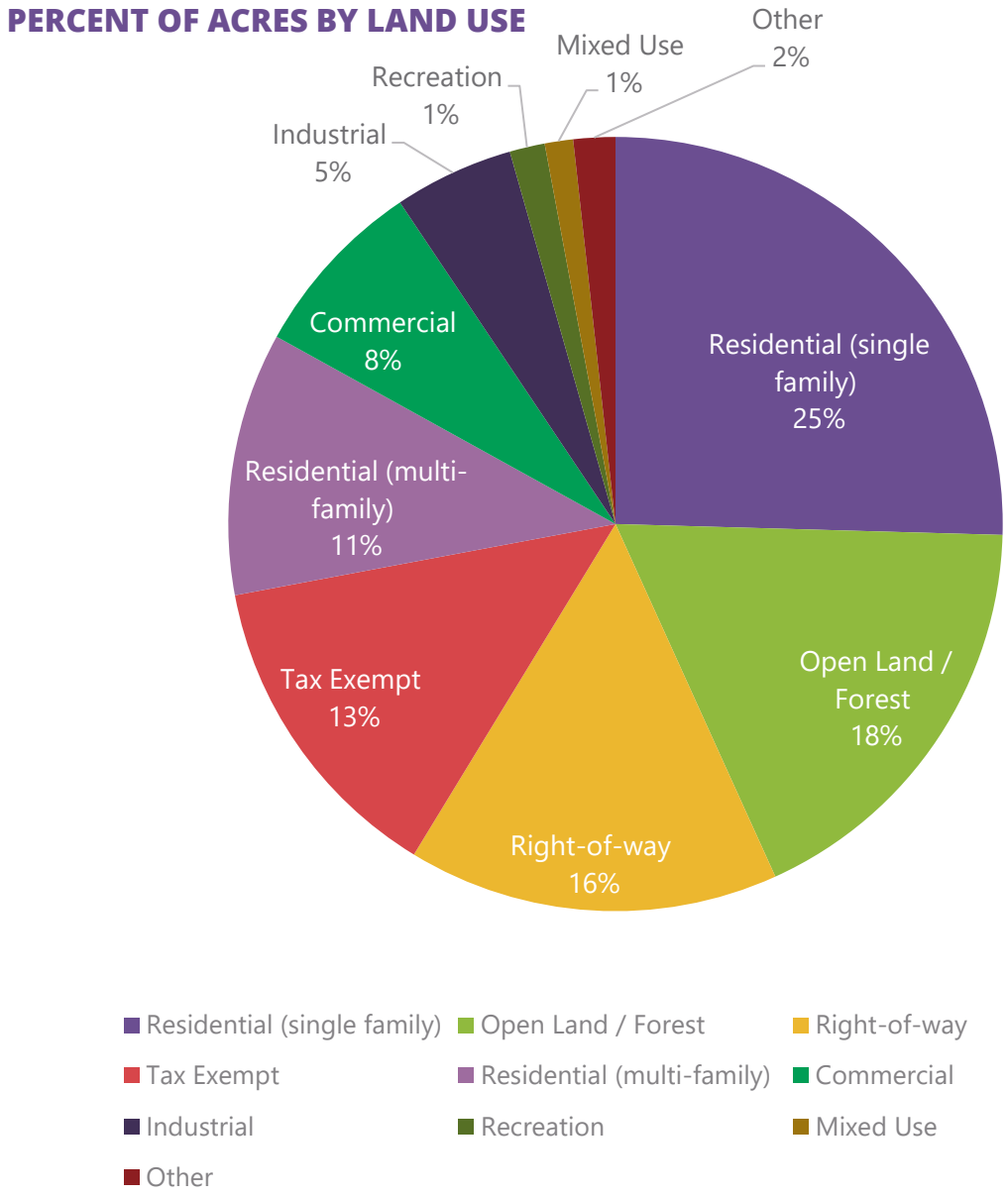
EXISTING CONDITIONS RECAP

3

Land Use and Travel Patterns

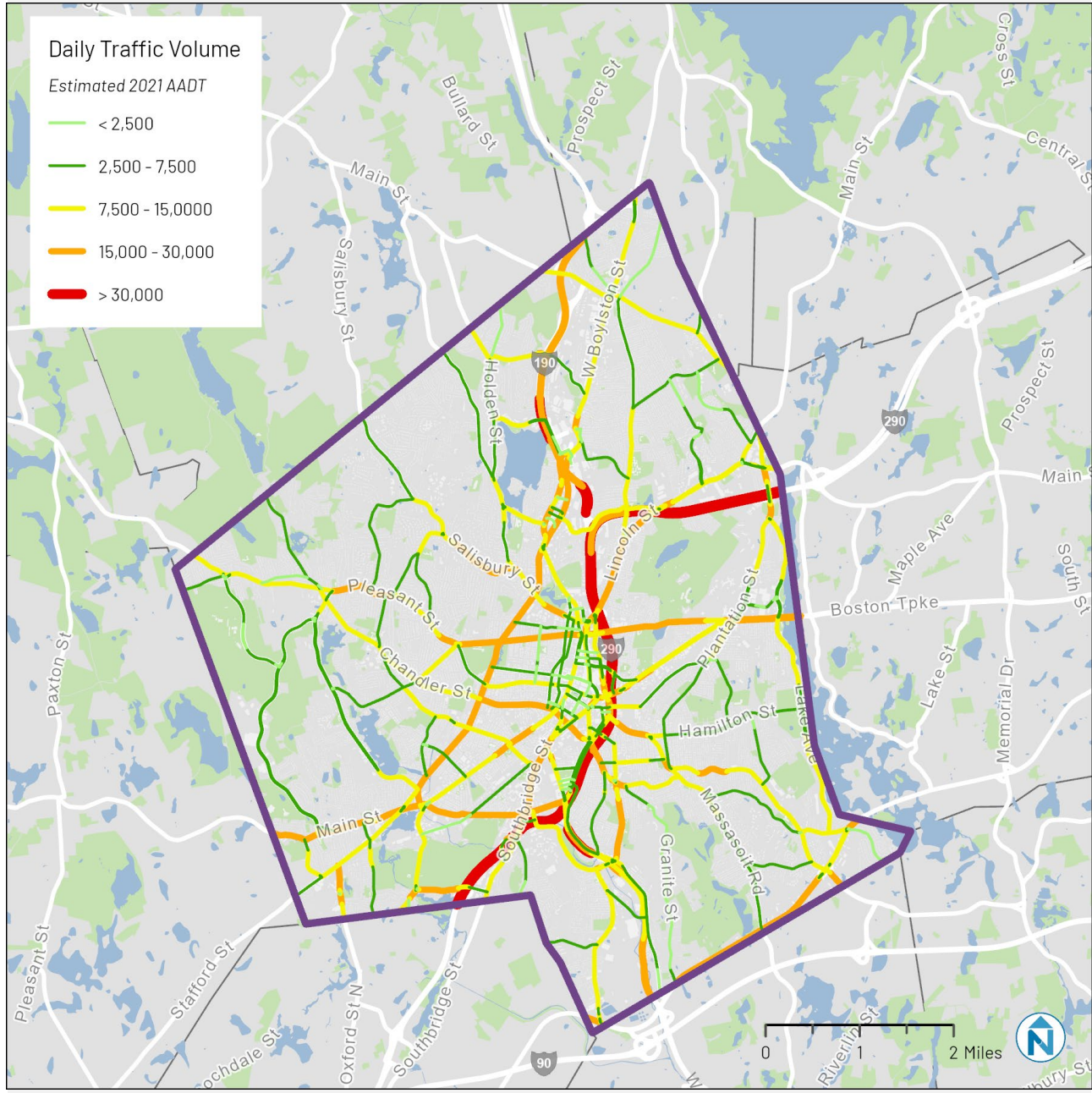
Land Use

- The City's existing land use is largely made up of residential, open space, and right-of-way land uses.
- A quarter of the city is designated as single-family residential, including a large portion of the western half of the city.
- The majority of this single-family residential land surrounds the downtown core, which largely consists of multi-family residential and commercial land uses.
- Multifamily residential is most prominent and at highest density in the city's core and older neighborhoods south and east of downtown.
- Commercial land uses are situated along prominent corridors. Mixed use land uses occur primarily in the core, with strong segregation of uses in outlying, largely residential neighborhoods.
- Low density land uses which are connected along high volume arterials make alternative transportation modes challenging for many residents.



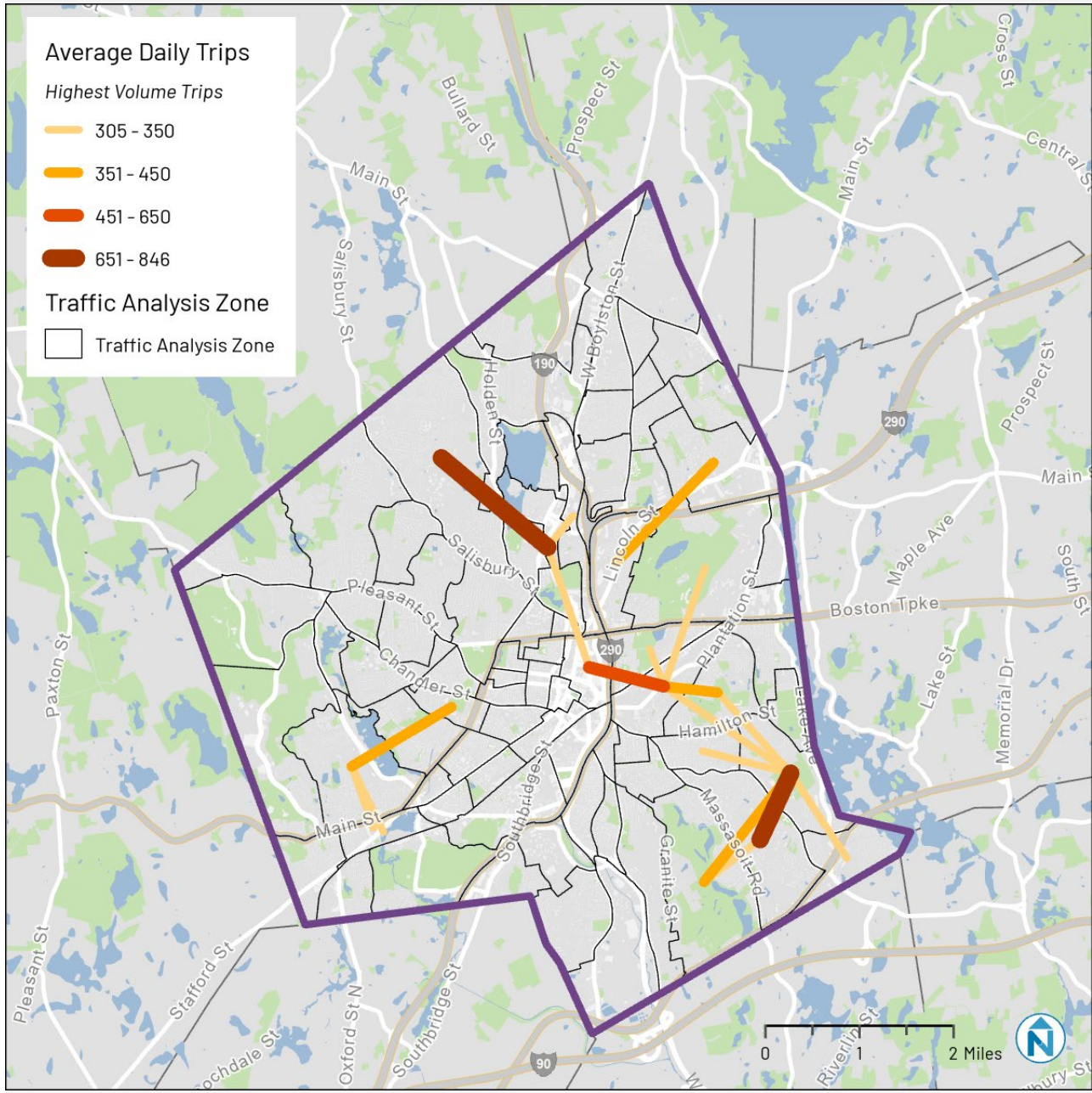
Daily Traffic Volume

- Location-Based Services (LBS) travel data – data aggregated from mobile devices such as smartphones – can also be used to estimate traffic volume on roadways.
- LBS data from 2021 shows high traffic volume on the major highways (greater than 50,000 vehicles per day).
- Other major roadways such as Park Avenue, Main Street, and Route 9 have between 15,000 and 30,000 vehicles travelling on the roadways every day.



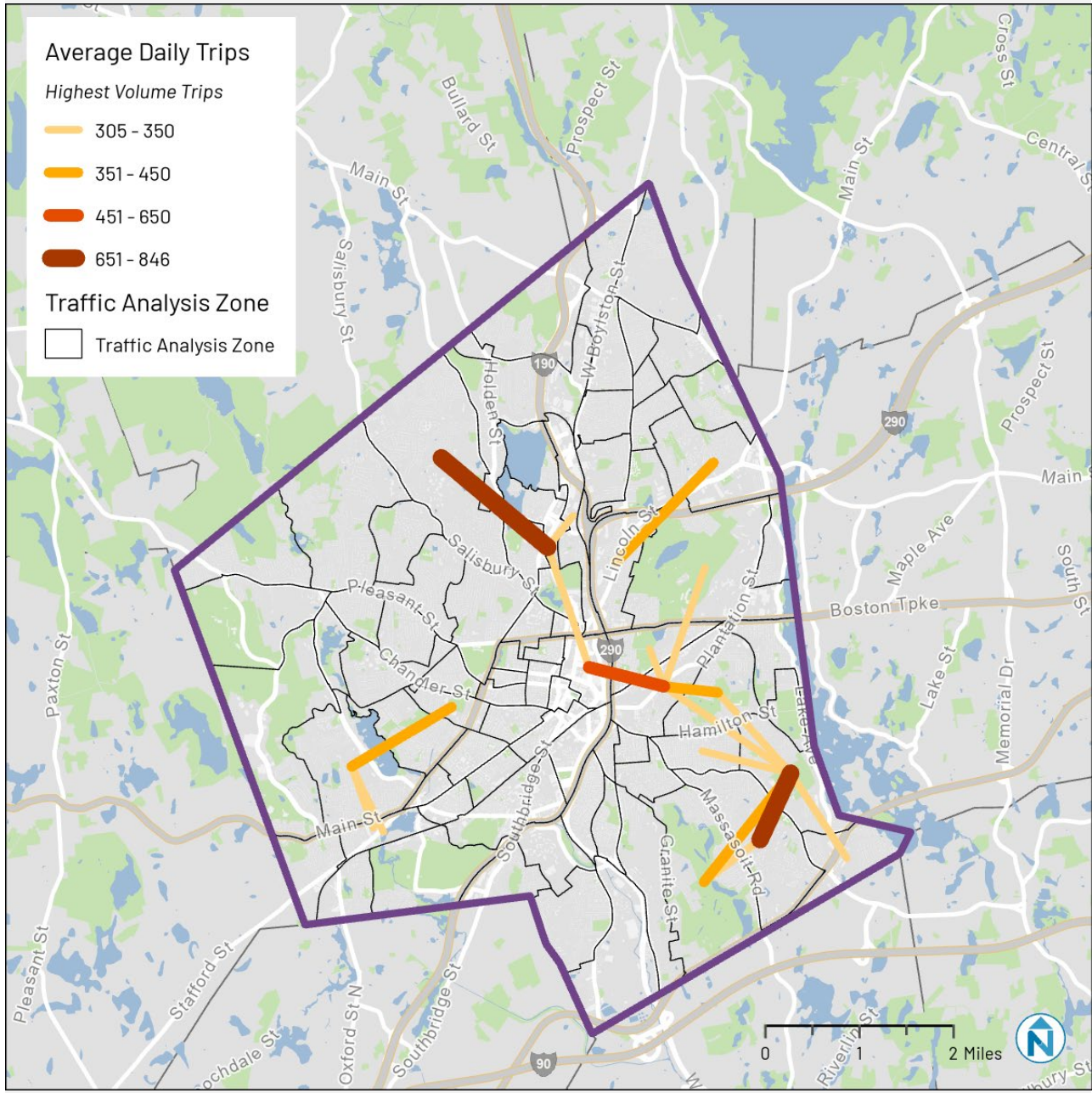
Travel Patterns

- Location-Based Services (LBS) travel data – data aggregated from mobile devices such as smartphones – can help to shed light on the most current travel patterns in Worcester.
- LBS data from October 2022 shows high travel volume flows between several key Traffic Analysis Zones (TAZs).
- Strongest travel connections were found between:
  - Salisbury Street/Assumption University area and Gold Star Boulevard commerce areas
  - Stop & Shop shopping center off Grafton Street (Rt-122) and residential areas of Wexford Village Apartments and Broadmeadow Brook.
- Residential neighborhoods generated high traffic volumes; trip destinations were usually close to their origin (less than 3 miles).
- Many of these travel flows do not follow a radial pattern, meaning radial transit networks don't efficiently support these trip.



Travel Patterns

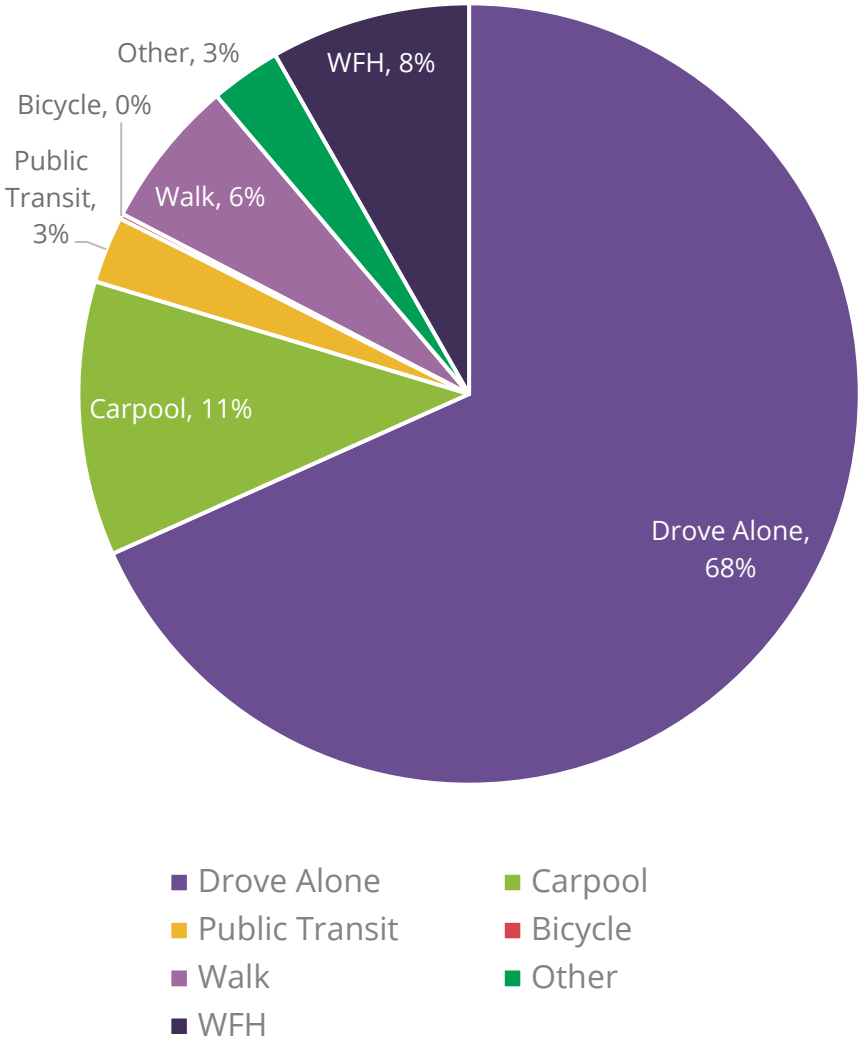
- Do any of these areas stand out to you?
- Why do you think these areas show up as travel pairs?
- Are there other key areas or connection points you think are important?



Travel Choice

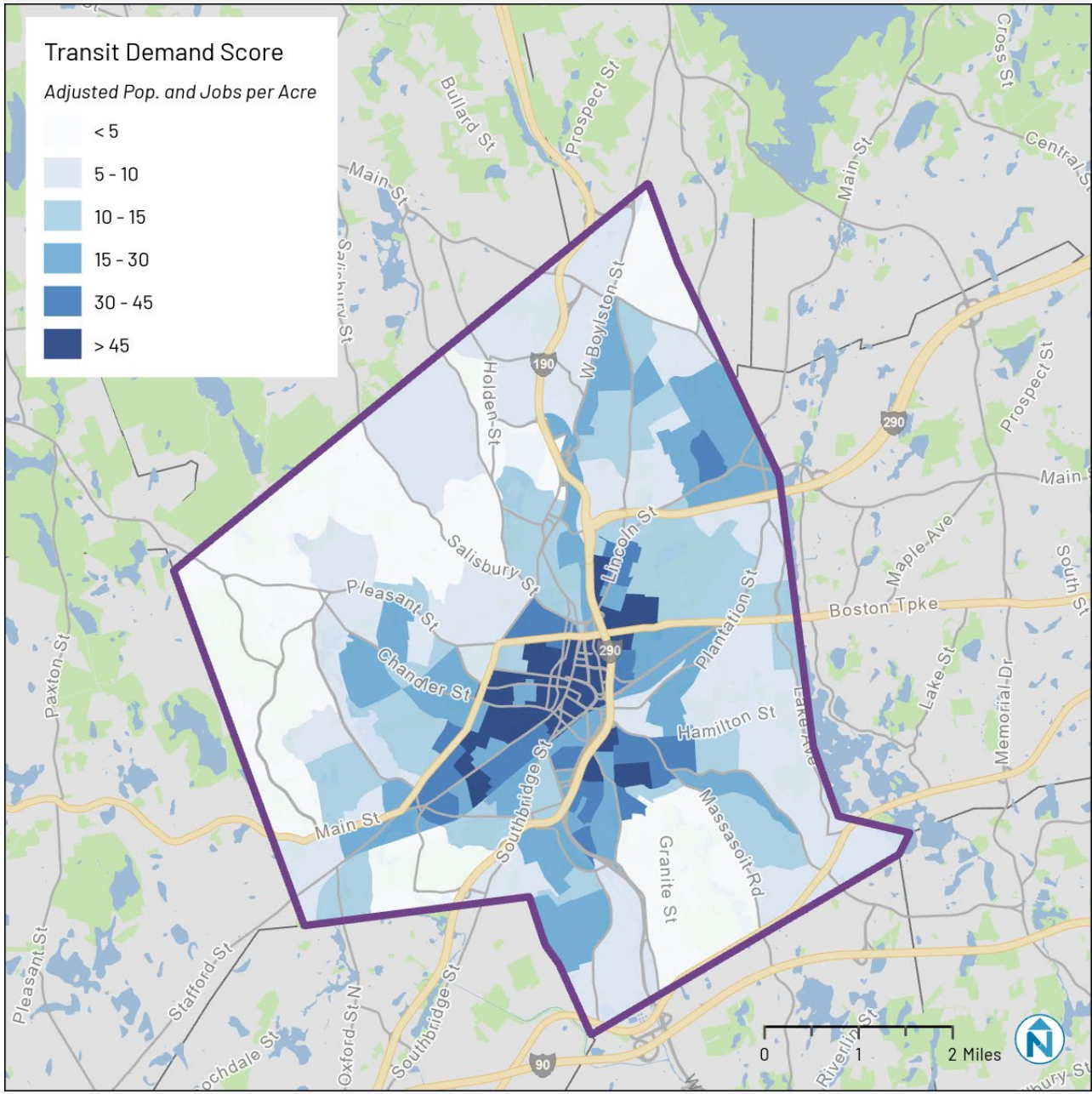
- 68% of Worcester residents drive alone and 11% carpool to work. Just 3% take public transit and 6% walk to work, and less than 1% bike to work.
- Despite Worcester's car-centric street network/design and commute patterns, a sizable portion of the community does not have access to a personal automobile in their household. 26% of all renters and 17% of the community in total, do not own or have access to a private automobile.
  - The disconnect is more pronounced in the city center where 41% of renters and 38% of all residents do not have access to a private vehicle (2020).
  - 60% of all households, and 76% of rental households, have 1 or fewer vehicles

PERCENT OF COMMUTERS BY MODE CHOICE (2021)



Mobility Demand

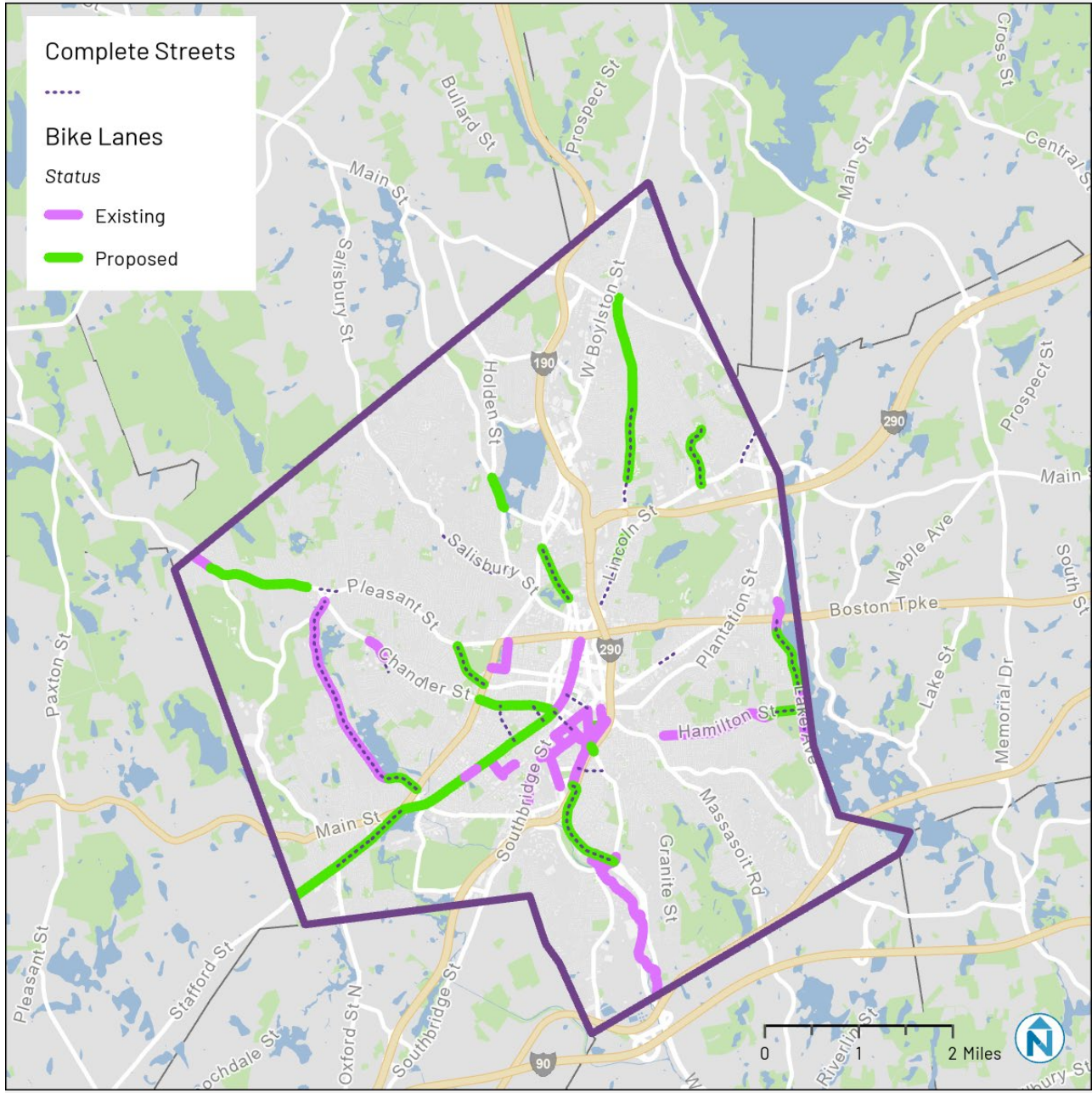
- Transit Demand Analysis considers population density, employment density, and socio-economic characteristics combined into a Transit Propensity Index.
- A main factor in determining potential transit demand is based upon where people live and work, and how those areas are concentrated.
- In addition to density, socioeconomic characteristics influence people's propensities towards using transit.
- Many population groups, often those historically and currently marginalized, rely on transit more than the general public.
- To plan transit equitably, transit agencies should focus their investments on areas with high populations of these communities.
- Transit Propensity Index can also help guide prioritized investments in other alternative transportation networks.



Transportation Modes

Biking, Micro-Mobility, and Complete Streets

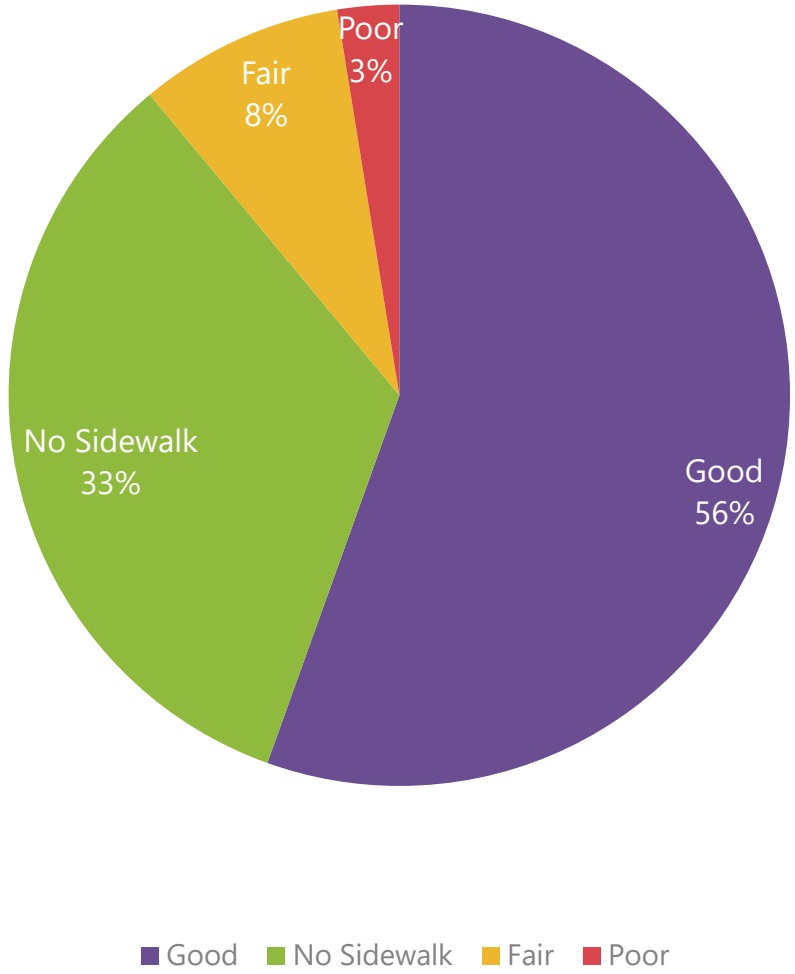
- The City's bike network is currently fragmented. Bicycle access within the City is limited largely due to the lack of separated and connected designated bike facilities.
  - 7.2 miles of on-street lanes and 3.4 miles of off-street paths
- Off-street paths provide great building blocks from which to connect and extend the bike network.
- People are already using the roadways and sidewalks for bicycling, for transportation and for recreation purposes. Providing safe accommodation for bicycling and other micro-mobility modes is needed.
- The City recently completed a Complete Streets Prioritization Plan, which describes current and near-term project needs. This plan will be periodically updated.



Walking and Rolling

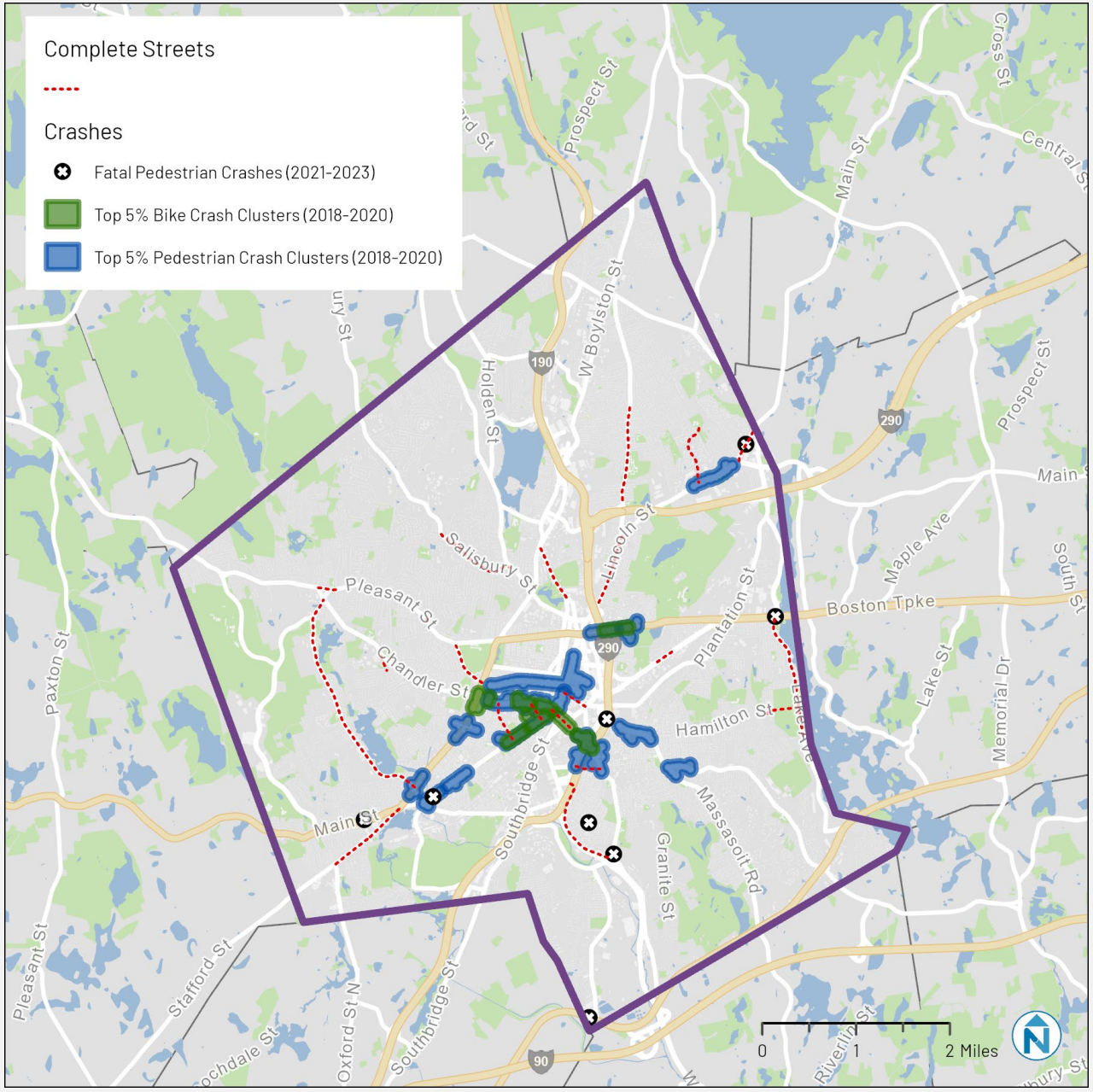
- Worcester has sidewalks lining most blocks in the central city, however many sidewalks have connection gaps or are in poor condition.
- Sidewalks are also often narrow, located adjacent to the curb with no landscape strip or buffered separation from vehicle travel zone.
- Curb ramps and ADA accessibility improvements, such as audible walk signals are needed in many locations.
- Public comments during engagement activities highlighted additional challenges for walking:
  - Highways and access ramps create perceived and real barriers between parts of the City.
  - Limited opportunities to safely cross major corridors, especially outside of the core.
  - Lack of street trees create undesirable or uncomfortable experiences.

SIDEWALK CONDITIONS ALONG WORCESTER ROADWAYS



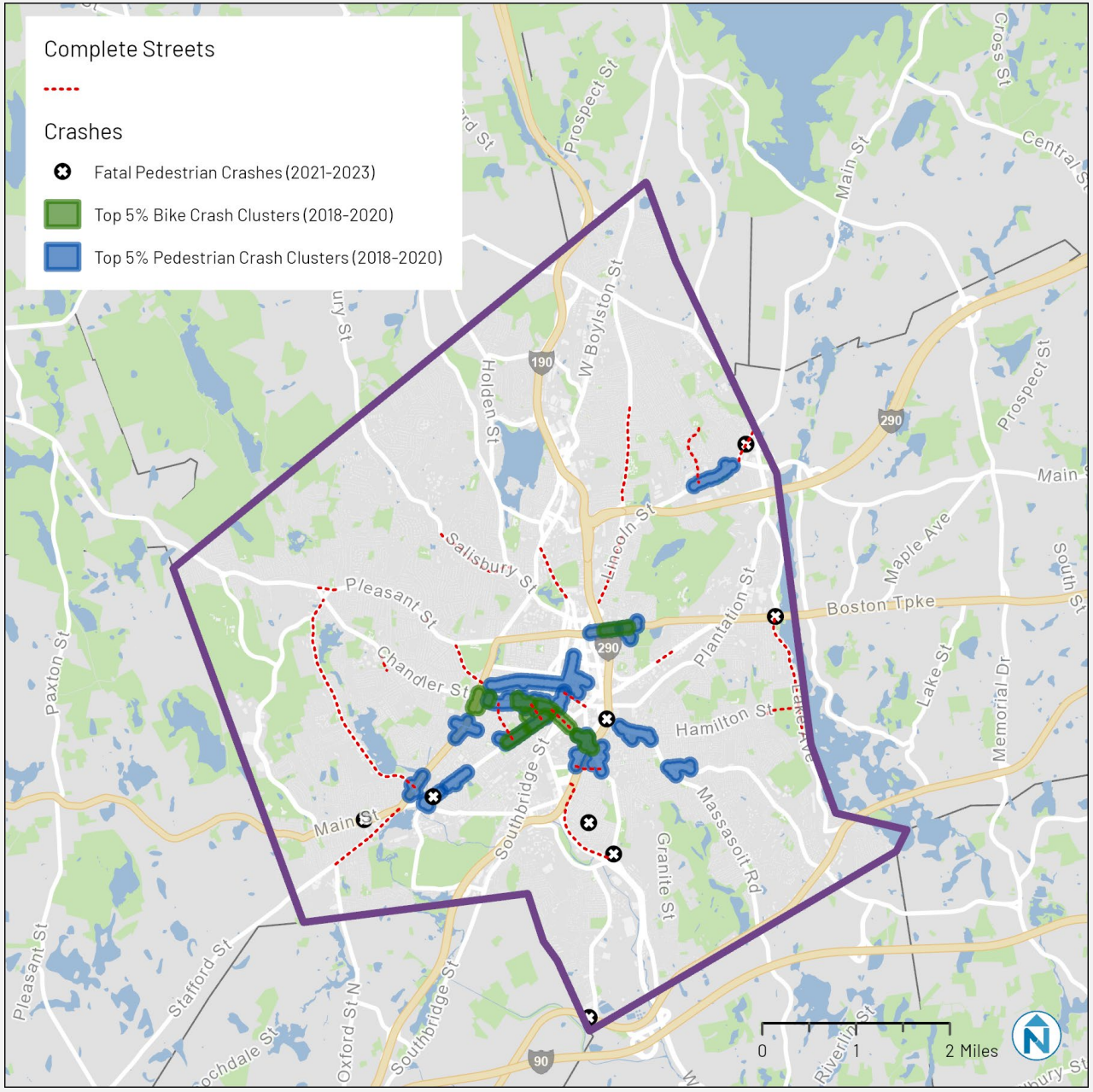
High Crash Locations

- MassDOT organized its bicycle and pedestrian crashes from 2011-2022 based on crash incidences and severity to determine the top 5% crash clusters of each regional planning agency.
- Worst crashes involving bicyclists or pedestrians are spread across the City but concentrated at key intersections and along key corridors.
- Highest concentration of crashes involving pedestrians:
  - Belmont St & Edward St / Main St intersections at Martin Luther King Blvd, Chandler St, Castle St, Maywood St / Lincoln Square Plaza along Lincoln Street
- Highest concentration of crashes involving bicyclists:
  - Park Ave & May St / Main St & Chandler St, Shrewsbury St & Hill St, Park Ave & Maywood St
- Data also shows the Kelley Square intersection as a hot spot for crashes. The intersection was rebuilt in 2021, and early data suggests that the redesign is reducing crashes.
- The City is initiating a Vision Zero Safety Action Plan this year.



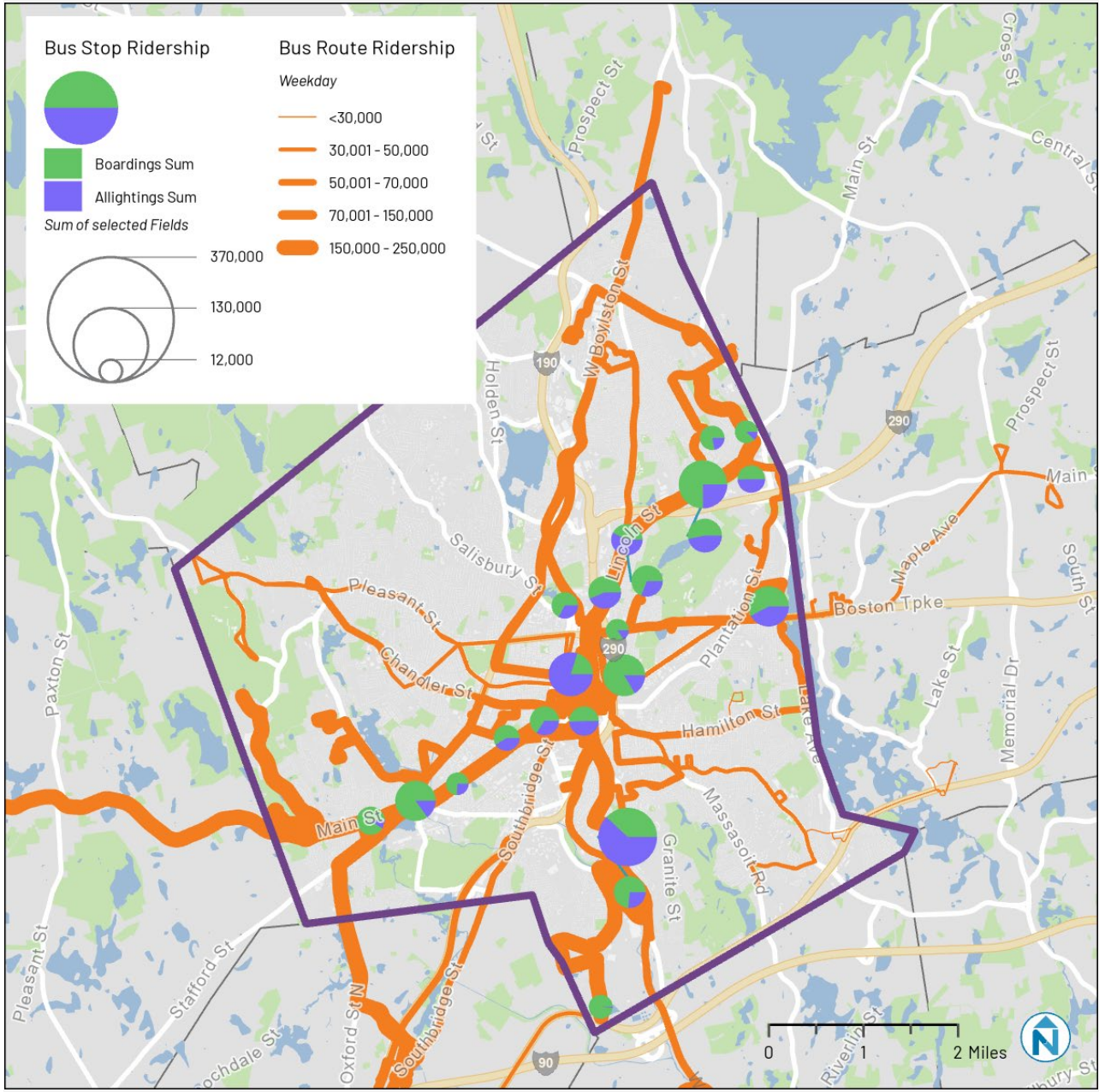
High Crash Locations

- Does this map highlight areas where you don't feel safe travelling?
- Are there other areas that should be highlighted as places for concern?



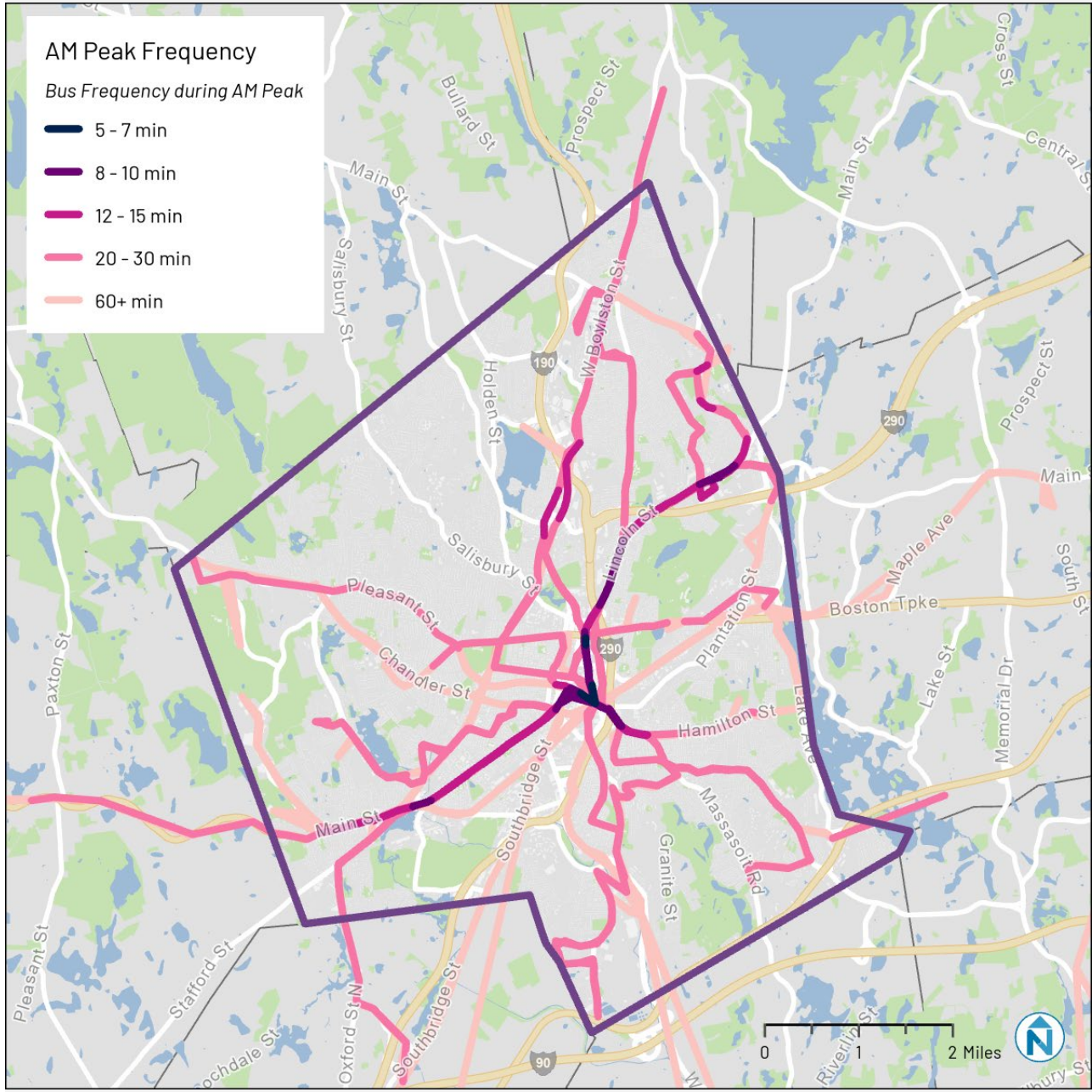
Public Transit

- WRTA operates 24 fixed bus routes and 3 community shuttle vans. Ridership increased from 10.3K to 12.5K riders between 2019 and 2022.
- Highest ridership is focused downtown and at key activity centers:
  - Main St south and west of downtown and Lincoln St (MA-70) north and east of downtown / UMass Memorial Medical Center (along Route 9 east of downtown) / Walmart Supercenter (off State Road 146 south of downtown).
  - Bus routes along Lincoln St, Main St, Grove St, Highland St, Park Ave, Vernon St, and Millbury St have the highest ridership.
- Public comments during engagement activities highlighted opportunities and challenges of Worcester's transit system:
  - Congestion along downtown roads slows down transit.
  - Bus reliability is a major limitation when considering transit as a viable alternative mode of transportation.



Transit Frequency & Transit Coverage

- WRTA fixed bus routes have varying frequency of service. During the morning peak hour, as many as 8-12 buses per hour run on certain downtown streets (one bus every 5-7 minutes).
  - Transit priority in these discrete locations could help to improve bus speed and reliability for the whole system.
- WRTA's network provides good coverage of fixed routes for areas that show high transit propensity. But other transit access challenges remain:
  - Many routes have limited hours of service and low frequency.
  - Some key activity centers are not connected by transit which limits job and educational opportunities. Analysis of travel flows could help direct locations for new service.



Other Transit Options

Other transit options operating out of Union Station include:

- Amtrak
  - Lake Shore Limited route provides connections between Boston and Chicago
- MBTA Commuter Rail
  - Provides access to Metro West and metro Boston with 20 inbound trains/day
  - Heart to Hub train providing direct service between Boston and Worcester now has interim stops/is no longer express
- Peter Pan Bus
  - Private bus service to Springfield, Providence, New York City, and Hartford
- Greyhound Bus

Amtrak Lake Shore Limited

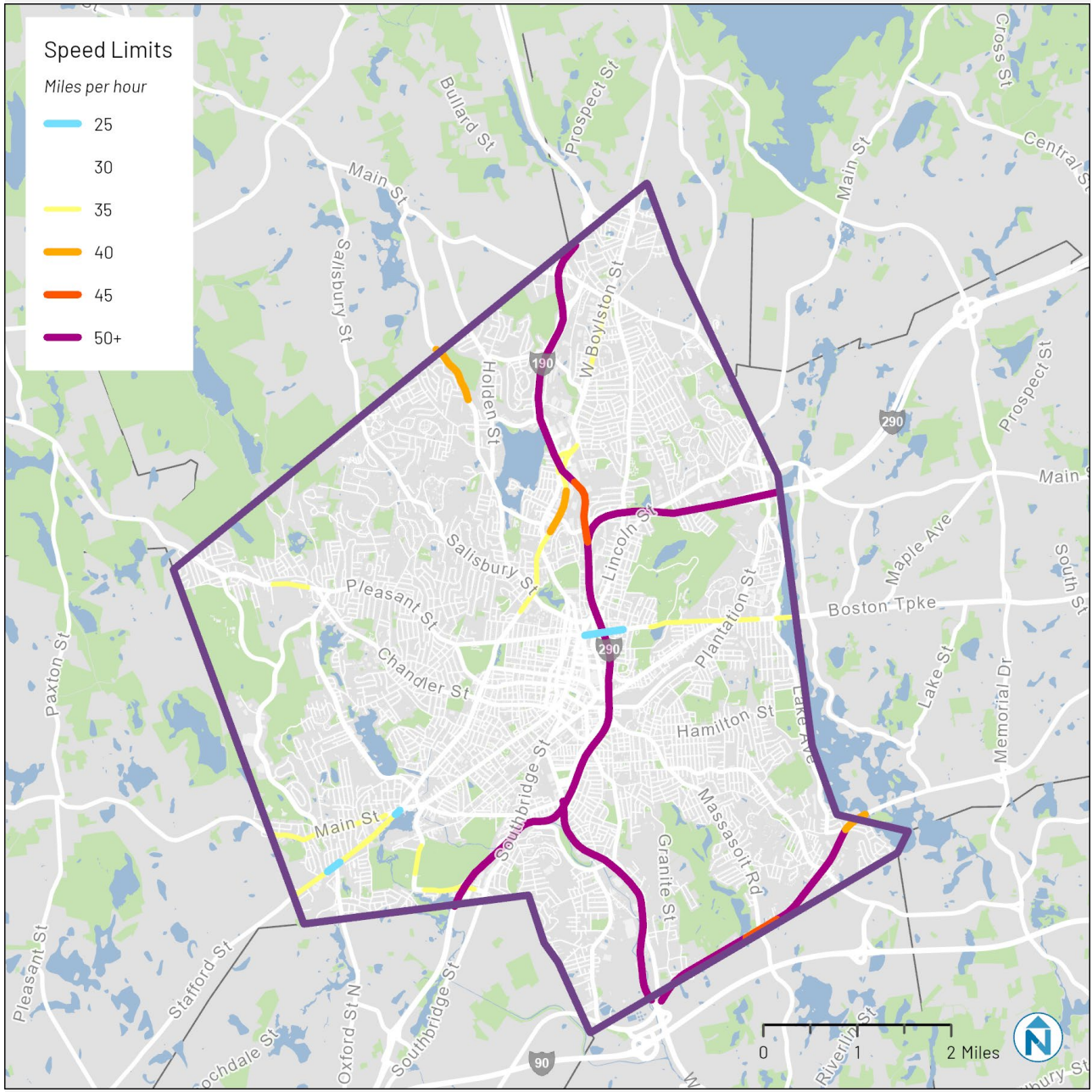
Shared Mobility

- Transportation Network Companies (TNCs) are permitted to operate in Worcester. In 2022, 1.3 million rides were initiated in Worcester, making it the third highest year behind 2019 and 2018.
- Ofo, a private bikeshare company, operated in the City between 2017 and 2018. Currently, no private bike or e-scooter share companies operate in Worcester. The City is working to ensure that, in the future, private companies are given specific guidance and use restrictions to ensure safe travel and storage of micro-mobility devices.
- MassBike was awarded a grant to distribute 100 electric bicycles to low-income residents of Worcester as part of a 2-year program. The e-bikes were deployed between fall 2022 and early 2023. Programs such as this will benefit from expanded infrastructure, as well as supporting programs and policies.
- Zip Car, a car share company, operates at two locations in the city.

Ofo Bike Share, Worcester Magazine

Vehicular Network

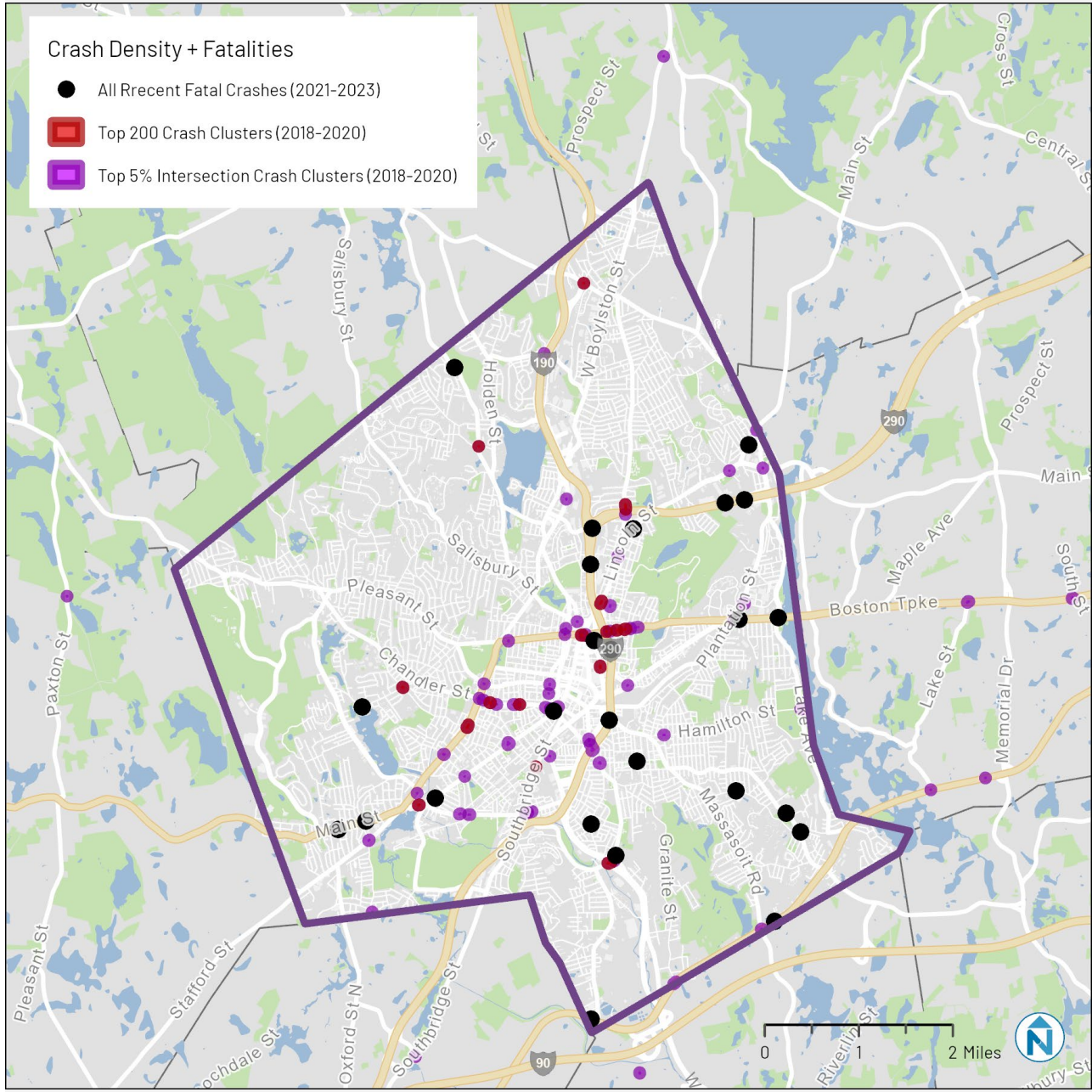
- Worcester has several major highways and roadways running through the city, including I-290, I-190, and Route 146.
- Interstate 290 runs north-south through Worcester's spine. Other major state roads serve as major arterials through the City. These roads serve as key corridors for commercial and retail activity but also can be potential barriers for walking and bicycling.
- Most streets in Worcester have a speed limit of 30 mph. The collectors and major arterials have speed limits varying between 30 and 35 mph.
- Multiple lanes along with wide lane width of many roadways encourage speeding.
- Parking requirements encourage vehicle use (and limit development opportunities)



Note: All roadways in the City of Worcester are 30 mph except for those mapped here which are regulated through the City's ordinance

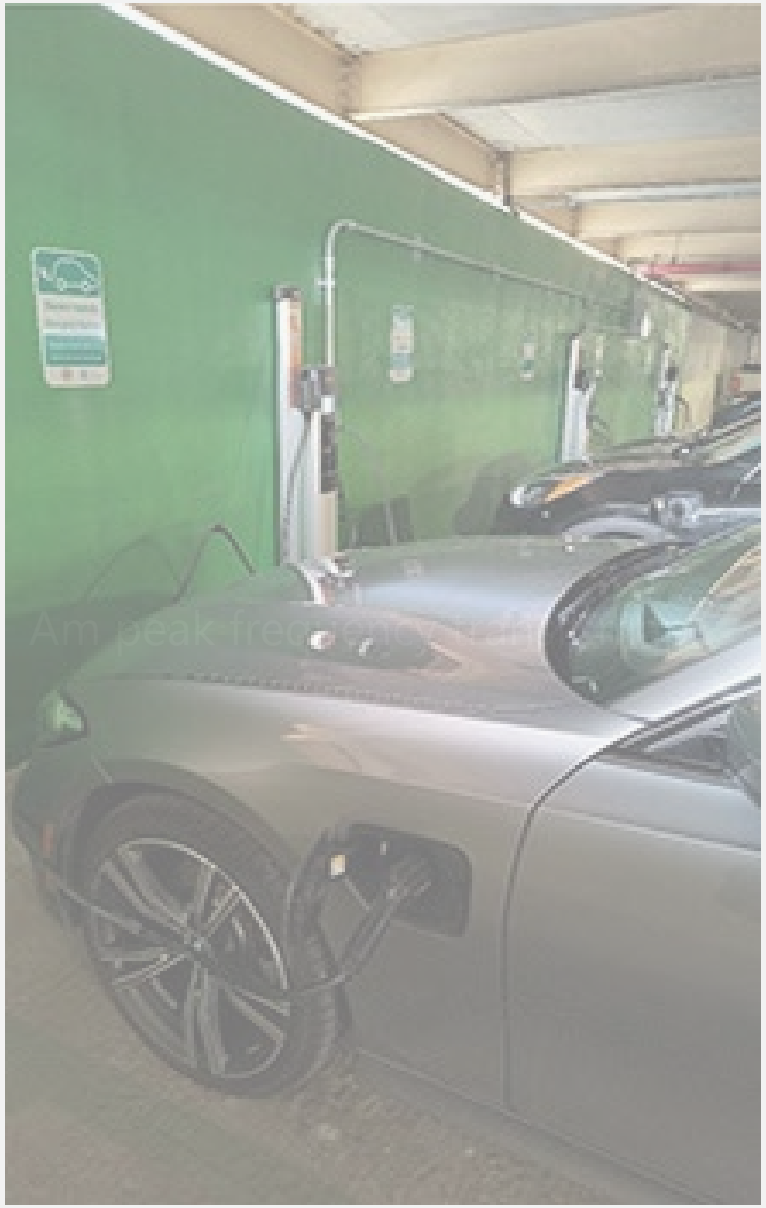
Crash Clusters and Fatal Crashes

- In the past five years, 49 fatalities and 457 serious injuries occurred as a result of crash-related incidents in Worcester.
- In the past two years alone, 25 crash-related fatalities occurred, eight of which involved a pedestrian (32% of all fatalities).
- High-crash clusters are located along the city's most prominent corridors which are mostly classified as either collectors or major arterials. These types of roadways typically have higher speed limits of at least 30 mph compared to those classified as local roadways.
- The City is initiating a Vision Zero Safety Action Plan this year.



Vehicular Infrastructure

- Paid parking in Worcester is generally limited to downtown, Canal District, and scattered neighborhood commercial districts.
- There are 12 paid municipal parking lots and garages in central Worcester.
- The City of Worcester manages curbside use in the urban core with app-enabled parking meters and kiosks. Most metered spaces are located downtown and in the Canal District, with some metered parking at UMass Memorial Hahnemann Family Health Center and at small shopping areas across the city.
  - Parking meters are enforced from Monday – Saturday until 8PM or 9PM with a two-hour limit for parking on Sundays in the Canal District.
- 30 publicly accessible electric vehicle charging stations are in Worcester. Many of the stations are free for the public to use.



https://www.worcesterma.gov/sustainability-resilience/vehicle-electrification

VISION & GOALS

4

Vision

The City of Worcester's transportation network supports people of all ages and abilities with connected and accessible infrastructure that allows for safe, equitable, and sustainable mobility choices.

Goals

Safety | **Equity** | **Sustainability** | **Connectivity**

An Evaluation Metric should…

Allow the Mobility Action Plan team to identify, select, and prioritize recommendations

Allow the City to prioritize recommendations for execution

Enable the City to evaluate project/policies/programs

Safety

Goal

Build and operate safe streets for everyone regardless of age, ability or transportation mode with a goal of zero traffic fatalities or serious injuries. Maintain transportation infrastructure in good condition.

Metrics

- ✓ Does this project work towards eliminating traffic-related fatalities or serious injuries?
- ✓ Does this project reduce vehicle speeds?
- ✓ Does this project add to a complete streets network?
- ✓ Does this project contribute to an all-ages and abilities bicycling/micromobility network?
- ✓ Does this project contribute to an all-ages and abilities walking network?

Equity

Goal

Provide all residents with quality and affordable transportation options to meet their daily needs. Prioritize transportation improvements serving communities that have been historically neglected, underserved or disproportionately impacted by past transportation decisions, while recognizing and reducing adverse impacts that the transportation system has had on these communities.

Metrics

- ✓ Does this project improve access and reliability of public transportation?
- ✓ Does the project improve transportation choices and reduce the cost burden on environmental justice neighborhoods?
- ✓ Will this project be (or has this project been) developed through co-creation with a community or driven by meaningful community input?
- ✓ Does the project improve the safety and/or quality of facilities located in environmental justice communities?

Sustainability

Goal

Reduce impacts of the transportation system on the environment and public health by shifting mode share to sustainable travel choices, reducing the use of fossil fuels, and incorporating green infrastructure to improve air quality, flooding, and urban heat island effect. Align transportation investment with land use regulations to promote walkable mixed-use neighborhoods with access to transit and micromobility travel options.

Metrics

- ✓ Does this project increase mode share of walkers, cyclists, micro-mobility users and public transit riders, thereby causing a reduction in vehicle miles traveled?
- ✓ Does this project promote a reduction in vehicle fossil fuel emissions? *Point-source emissions? General GHG emissions? Other vehicle-related pollution?*
- ✓ Does the project incorporate green infrastructure to improve resilience against environmental hazards such as flooding or heat island effects?

Connectivity

Goal

Develop an integrated and efficient transportation network that offers multiple transportation choices and expands opportunities to access local and regional destinations.

Metrics

- ✓ Does the project connect high-demand destinations with multiple transportation options?
- ✓ Does the project improve access to everyday destinations like schools, parks and recreation areas, employment, healthcare, grocery stores and/or government offices?
- ✓ Does the project fill a gap in the existing multimodal transportation network?

OPEN DISCUSSION

5

Public Comment Period

How to:

- Use the “raise hand” tool to indicate you wish to speak.
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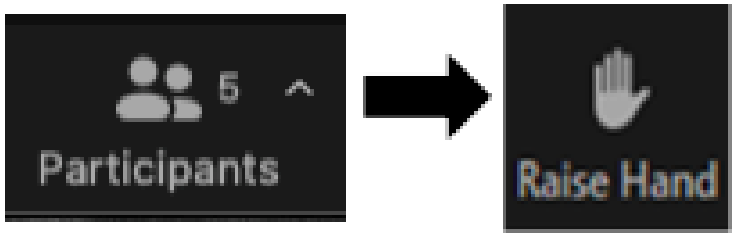

Thank you!

NELSON
NYGAARD

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